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EXAMINER

NGUYEN, DUNG X

ART UNIT PAPER NUMBER

2631

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/954,663

Applicant(s)

LYLE ET AL.

Examiner

Dung X Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 143 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 143 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/23/02, 9/12/01</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because the lengthy abstract has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the abstract. Correction is required. See MPEP § 608.01(b).
2. Claim 4 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 4 is just a repeated claim of claim 2.

Claim Objections

3. **Claim 1 is objected** to because of the following informalities: the abbreviation "TMDS as recited in line 4 must be defined, at least once at the first appearance. Appropriate correction is required.
4. **Claim 16 is objected** to because of the following informalities: after "data", second appearance, "." as recited in line 3 should be changed to ",". Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
6. **Regarding claims 1 - 143**, the phrase "TMDS-like communication link" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "TMDS-like communication link"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. **Claim 60 is rejected** under 35 U.S.C. 102(e) as being anticipated by Perlman et al. (US patent # 6,141,693).

Regarding claim 60, Perlman et al. discloses (figure 5) a transmitter for use in data link transmission over a link, the transmitter including:

- A receiver (505, 510);
- A transmitter (501); and
- A communication link between the transmitter and the receiver (503), wherein the link comprises at least one digital video channel and at least one analog video channel, the transmitter is configured to transmit digital video data to the receiver over the digital video channel, and at least one of the transmitter and the receiver is configured to operate in a mode in which it transmits auxiliary data to the order of the transmitter and the receiver over the analog video channel (507) (column 6, line 43 to column 7, line 15).

9. **Claims 60 and 61 are rejected** under 35 U.S.C. 102(e) as being anticipated by Perlman et al. (US patent # 6,141,693).

Regarding claim 60, Rakib discloses (figure 3) a transmitter for use in data link transmission over a link, the transmitter including:

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- A receiver (102);
- A transmitter (134); and
- A communication link between the transmitter and the receiver (132), wherein the link comprises at least one digital video channel and at least one analog video channel, the transmitter is configured to transmit digital video data to the receiver over the digital video channel, and at least one of the transmitter and the receiver is configured to operate in a mode in which it transmits auxiliary data to the order of the transmitter and the receiver over the analog video channel (page 6, paragraph 0057).

Regarding 61, as followed by the limitations analyzed in claim 60, Rakib further discloses (figure 3) that wherein the auxiliary data are digital audio data, and the transmitter is configured to operate in a mode in which the transmitter transmits the audio data to the receiver (127) over the analog video channel while transmitting the digital video data to the receiver over the digital video channel (page 6, second column, paragraph # 0057).

10. **Claims 36, 43, 46, 48, 68, 69, 74 – 76, 79, 89 – 92, 95, 99, and 101 are rejected under 35 U.S.C. 102(e) as being anticipated by Piccirillo et al. (US patent # 5,557,278).**

Regarding claim 36, Piccirillo et al. discloses (figure 1) a communication system, including:

- A receiver;
- A transmitter; and
- A communication link between the transmitter and the receiver (10), wherein the transmitter is configured to transmit data over the link to the receiver, the link includes at least one multi-purpose line, the transmitter and the receiver are operable in a first mode in which one of the transmitter and the receiver transmit a first signal indicative of auxiliary data over at least one multi-purpose line to the other one of the transmitter and the receiver, and the transmitter and the receiver are operable in a second mode in which one of the transmitter and the receiver transmits a second signal over the at least one multi-purpose line to the other one of the transmitter and the receiver (column 4, lines 46 to column 5, line 21).

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Regarding claim 43, Piccirilo et al. discloses (figure 1) a communication system, including:

- A receiver;
- A transmitter;
- A communication link between the transmitter and the receiver (10), wherein the transmitter is configured to transmit data over the link to the receiver, wherein the link includes an additional channel for bi-directional communication between the transmitter and at least one of the receiver and a device associated with the receiver, and wherein at least one of the transmitter and the receiver is operable in a mode in which it transmits auxiliary data over the additional channel to other one of the transmitter and the receiver (column 4, lines 46 to column 5, line 21).

Regarding claim 46, as followed by the limitations analyzed in claim 43, Piccirilo et al. further discloses that the auxiliary data are audio data (column 4, line 18).

Regarding claim 48, Piccirilo et al. discloses (figure 1) a communication system, including: and

- A receiver;
- A transmitter; and
- A communication link between the transmitter and the receiver (10), wherein the link comprises at least two video channels, the transmitter is operable in a first mode in which it transmits video data to the receiver over a first subset of the video channels but not a second subset of the video channels, the transmitter is operable in another mode in which it transmits video data to the receiver all of the video channels, and the transmitter is configured to transmit auxiliary data to the receiver over the second subset of the video channels during the first mode (column 4, lines 46 to column 5, line 21).

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- A transmitter; and
- A communication link between the transmitter and the receiver (10), wherein the link comprises at least one video channels, the transmitter is configured to transmit video data and auxiliary data to the receiver over the video channel, the video data are determined by a first set of code words, the auxiliary data are determined by a second set of code words, and none of the code words in the second set is a member of the first set (column 4, lines 46 to column 5, line 21).

Regarding claim 68, Piccirilo et al. discloses (figure 1) a communication system, including: and

- A transmitter;
- A receiver; and
- A communication link between the transmitter and the receiver (10), wherein the link has multiple data transmission channels, the transmitter is configured to transmit video data to the receiver over at least a first channel of the link, and at least one of the transmitter and the receiver is configured to transmit a first stream of auxiliary data over a second channel of the link to other one of the transmitter and the receiver, and at least one of the transmitter and the receiver is configured to transmit a second stream of auxiliary data over one of the first channel of the link and a third channel of the link to the other one of the transmitter and the receiver (column 4, line 46 to column 5, line 21).

Regarding claim 69, as followed by the limitations analyzed in claim 68, Piccirilo et al. further discloses that the auxiliary data are audio data (column 4, line 18).

Regarding claim 74, as followed by the limitations analyzed in claim 68, Piccirilo et al. further discloses that wherein the transmitter is configured to transmit the first stream of auxiliary data over the second channel of the link to the receiver, and the receiver is configured to transmit the second stream of auxiliary data over the third channel of the link to the transmitter (column 4, line 46 to column 5, line 21).

Regarding claim 75, as followed by the limitations analyzed in claim 68, Piccirilo et al. further discloses that wherein the transmitter is configured to transmit the first stream of auxiliary data over the second channel of the link to the receiver, and the receiver is configured to transmit the second stream of auxiliary data over the first channel of the link to the transmitter (column 4, line 46 to column 5, line 21).

Regarding claim 76, as followed by the limitations analyzed in claim 68, Piccirilo et al. further discloses that wherein the communication link is a Digital Video Interface link (column 4, line 46 to column 5, line 21).

Regarding claim 79, as followed by the limitations analyzed in claim 68, Piccirilo et al. further discloses that wherein the transmitter is configured to transmit the first stream of auxiliary data over the second channel while the system employs the second channel for additional function (column 4, line 46 to column 5, line 21).

Regarding claim 89, Piccirilo et al. discloses (figure 1) a communication system, including:

- A transmitter;
- A receiver; and
- A communication link between the transmitter and the receiver (10), wherein the link has multiple data transmission channels, the transmitter is configured to transmit video data to the receiver over at least a first channel of the link, and at least one of the transmitter and the receiver is configured to transmit a portion of a stream of auxiliary data over a second channel of the link to the other one of the transmitter and the receiver, and at least one of the transmitter and the receiver is configured to transmit another portion of the stream of auxiliary data over one of the first channel of the link and a third channel of the link to the other one of the transmitter and the receiver (column 4, lines 46 to column 5, line 21).

Regarding claim 90, as followed by the limitations analyzed in claim 89, the limitations are analyzed as claim 46.

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Regarding claim 91, Piccirilo et al. discloses (figure 1) a communication system, including:

- A transmitter;
- A receiver; and
- A communication link between the transmitter and the receiver (10), wherein the link has multiple data transmission channels, the transmitter is configured to transmit video data to the receiver over at least a first channel of the link, the transmitter and the receiver is configured to transmit a first mode in which the transmitter transmits a signal indicative of auxiliary data over a second channel of the link to the receiver, and the transmitter and the receiver are configured operate in a second mode in which the receiver asserts a second signal over the second channel to transmitter (column 4, lines 46 to column 5, line 21).

Regarding claim 92, as followed by the limitations analyzed in claim 91, the limitations are analyzed as claim 46.

Regarding claim 95, Piccirilo et al. discloses (figure 1) a communication system, including:

- A transmitter;
- A receiver; and
- A communication link between the transmitter and the receiver (10), wherein the link has multiple data transmission channels, the transmitter is configured to transmit video data to the receiver over at least a first channel of the link, the transmitter and the receiver is configured to transmit a first mode in which the transmitter transmits a signal indicative of auxiliary data over a second channel of the link to the receiver, and the transmitter and the receiver are configured operate in a second mode in which the receiver asserts a second signal over the second channel to transmitter (column 4, lines 46 to column 5, line 21).

Regarding claim 96, as followed by the limitations analyzed in claim 95, Piccirilo et al. further discloses that wherein the receiver asserts the signal indicative of auxiliary to the

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transmitter over the second channel during the first mode, the receiver asserts the second channel during the second mode, and the second signal is indicative of presence of a device coupled to the receiver (column 4, line 46 to column 5, line 21).

Regarding claim 99, Piccirilo et al. discloses (figure 1) a receiver for use in data transmission over a link, the receiver including:

- An input for receiving auxiliary data (ARTS system 14);
- A video input (30) configured to be coupled to a video channel of the link (23c);
- An output configured to be coupled to another channel of the link (10);
- Circuitry, coupled to the output, and configured to operate in a first mode in which it asserts a signal indicative of the auxiliary data to the output, and to operate in a second mode in which it asserts to the output a signal indicative of presence of a device coupled to the receiver (column 4, lines 46 to column 5, line 21).

Regarding claim 101, Piccirilo et al. discloses (figure 1) a communication system, including:

- A transmitter;
- A receiver; and
- A communication link between the transmitter and the receiver (10), wherein the link includes has multiple data transmission channels, the transmitter is configured to transmit video data to the receiver over at least a first channel of the link, and at least one of the transmitter and the receiver is configured to transmit auxiliary data over a second channel of the link, to the other one of the transmitter and the receiver, while at least one of the transmitter and the receiver asserts a signal over the second channel (column 4, lines 46 to column 5, line 21).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. **Claims 1 – 6, 8, 15 - 19, 21, 31, 47, 52, 56, 57, 59, 99, 112, 125, and 130 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siegbert Hentschke (UK patent application publication # GB 2 174 577 A).**

Regarding claim 1, Siegbert Hentschke inherently discloses (figure 1 and abstract) that a communication system, including:

- A transmitter;
- A receiver;
- A communication link between the transmitter and the receiver, wherein the transmitter is configured to transmit main data stream over the link to the receiver, and the transmitter is configured to transmit auxiliary data to the receiver by word disparity of a channel of a communication link.

Siegbert Hentschke differs from the instant claimed invention that it does not expressly show the transmitter is configured to transmit auxiliary data to the receiver by modulating DC disparity of a channel of the communication link and the transmitter transmitting video data over the link to the receiver.

However, it would be obvious to one of ordinary skill in the art to implement the teaching of Siegbert Heitschke to show that the transmitter is configured to transmit auxiliary data to the receiver by modulating DC disparity instead of word disparity of the channel of the communication link since itself has employed a direct current free code (page 1, line 26)

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Therefore, from the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to recognize and implement Siegbert Hentschke to provide the requirements of the instant claimed invention for transmitting the video data to the receiver over the communication link instead of the main data stream.

Regarding claim 2, as followed by the limitations analyzed in claim 1, Siegbert Hentschke inherently further discloses that wherein the transmitter is configured to transmit a stream of encoded data words over the channel, the words determine the main data stream and include bits indicative of accumulated DC disparity of the stream, and those bits determine the auxiliary data (page 1, lines 16 – 29).

Again, Hentschke differs from the instant claimed invention that it does not expressly show the words determining the video data instead of the main data.

However, one of ordinary skill in the art is able to use the function of the transmitter is to transmit the various data (including the video data).

Therefore, from the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to recognize and implement Siegbert Hentschke's teaching to provide the requirements of the instant claimed invention for using words to determine the video data instead of the main data stream.

Regarding claim 3, as followed by the limitations analyzed in claim 2, Siegbert Hentschke inherently further discloses that wherein the receiver is configured to determined a sequence of differences between successive values of the accumulated DC disparity, thereby determining the auxiliary data (page 1, lines 16 – 29).

Regarding claim 4, as followed by the limitations analyzed in claim 1, Siegbert Hentschke further discloses that wherein the transmitter is configured to transmit a stream of

Regarding claim 5, as followed by the limitations analyzed in claim 1, Siegbert Hentschke inherently further discloses that wherein a sequence of instantaneous values of the DC disparity determines the auxiliary (page 1, lines 16 – 29).

Regarding claim 6, as followed by the limitations analyzed in claim 1, Siegbert Hentschke inherently further discloses that wherein a sequence of differences between successive values of DC disparity determines the auxiliary (page 1, lines 16 – 29).

Regarding claim 8, as followed by the limitations analyzed in claim 1, Siegbert Hentschke further discloses that wherein the auxiliary data determining at least one control signal (page 3, lines 20 – 27).

Regarding claim 10, the limitations are analyzed in the same manner set forth as the combination of claims 1, 2, and 6.

Regarding claims 11 and 12, respectively, as followed by the limitations analyzed in claim 10, the limitations are analyzed in the same manner set forth as the combination of claims 2 - 6.

Regarding claim 15, Siegbert Hentschke discloses (figure 1) a method of sending data over a communication link, comprising:

(a) Transmitting a stream of data words over at least one channel of the link thereby word disparity of the channel, such that the word disparity is indicative of auxiliary data (abstract and page 1, lines 16 – 29);

(b) Recovering the auxiliary data from the transmitted stream of data words (page 1, lines 48 – 52).

Siegbert Hentschke differs from the instant claimed invention that it does not expressly show the modulating DC disparity instead of word disparity to be indicative of auxiliary data.

However, it would be obvious to one of ordinary skill in the art to implement the teaching of Siegbert Heitschke to show that the transmitter is configured to transmit auxiliary data to the

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receiver by modulating DC disparity instead of word disparity of the channel of the communication link since itself has employed a direct-current-free code (page 1, line 26). Furthermore, it is well known in the art to transmit different types of data including video data to a destination.

Therefore, from the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to recognize and implement Siegbert Hentschke to provide the requirements of the instant claimed invention for transmitting the video data to the receiver over the communication link instead of the main data stream.

Regarding claim 16, as followed by the limitations analyzed in claim 15, Siegbert Hentschke further discloses that wherein the data encoded words main data stream, and also including the step of decoding the transmitted stream of data words to recover the main data, the transmitter and the receiver by modulating DC disparity of a channel of the communication link (abstract and page 1, lines 46 – 52).

Siegbert Hentschke differs from the instant claimed invention that it does not expressly show the transmitter transmitting video data instead of main data stream over the link to the receiver.

However, one of ordinary skill in the art is able to use the function of the transmitter is to transmit various data (including video data).

Therefore, from the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to recognize and implement Siegbert Hentschke's teaching to provide the requirements of the instant claimed invention for using the transmitter to transmit the video data to the receiver over the communication link.

Regarding claim 17, as followed by the limitations analyzed in claim 15, Siegbert Hentschke further discloses that wherein step (b) includes the step of recovering the auxiliary data from the disparity bits of the transmitted stream of data words (abstract and page 1, lines 16 – 52).

Regarding claim 18, Siegbert Hentschke discloses (figure 1) a method of a transmitter for use in data transmission over a communication link, comprising:

- An input for receiving auxiliary data ((D, page 1, line 43);
- An output configured to be coupled to a channel of the link (5, page 1, line 50); and
- Circuitry (1,3) coupled to the input and configured for generating an output signal in response to the auxiliary data (D), and asserting to the output for transmission over the channel, wherein the output signal words disparity of the channel and is indicative of the auxiliary data (abstract and page 1, lines 16 – 24).

Siegbert Hentschke differs from the instant claimed invention that it does not expressly show the steps of wherein the output signal modulates DC disparity of a channel of the communication link and is indicative of the auxiliary data.

However, it would be obvious to one of ordinary skill in the art to implement the teaching of Siegbert Heitschke to show that the transmitter is configured to transmit auxiliary data to the receiver by modulating DC disparity of the channel of the communication link since itself has employed a direct-current-free code (page 1, line 26). Furthermore, it is well known in the art to transmit different types of data including video data and auxiliary to a destination.

Therefore, from the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to recognize and implement Siegbert Hentschke to provide the requirements of the instant claimed invention for transmitting the video data and the auxiliary to the receiver over the communication link instead of the main data stream and the auxiliary data.

Regarding claim 19, as followed by the limitations analyzed in claim 18, Siegbert Hentschke further discloses that wherein the transmitter also has a main data stream (H) for receiving main data stream (page 1, lines 42 and 43), and output signal is also indicative of the main data stream (abstract).

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Again, Siegbert Hentschke differs from the instant claimed invention that it does not expressly show the transmitter transmitting video data over the link to the receiver, instead of the main data stream.

However, one of ordinary skill in the art is able to use the function of the transmitter is to transmit various data including video data.

Therefore, from the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to recognize and implement Siegbert Hentschke's teaching to provide the requirements of the instant claimed invention for using the transmitter to transmit the video data to the receiver data over the communication link.

Regarding claim 21, as followed by the limitations analyzed in claim 18, Siegbert Hentschke further discloses that wherein the transmitter is implemented as an integrated circuit (page 1, lines 5 and 6).

Regarding claim 47, Siegbert Hentschke discloses (figure 1) that a transmitter for use in data transmission over a communication system, wherein the link has a first channel (D) for communication between the transmitter and at least one of a receiver and a device associated with the receiver (5), the link also has at least one main data (H), the communication includes transmission from the at least one of the receiver and the device identification data specifying characteristics of the device (abstract and page 1, lines 16 – 52), the transmitter including:

- A first input for receiving auxiliary (D, page 1, lines 42 and 43);
- At least one main data input for receiving main data (H, page 1, lines 42 and 43);
- A first output configured to be coupled to the main data stream (page 1, lines 46 and 47);
- A second output configured to be coupled to the first channel (page 1, lines 46 – 52); and
- Circuitry, coupled to the first input the main data stream, the first output, and the

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transmission over the main data channel, and to generate a second output signal indicative of the auxiliary data and assert the second output signal to the second output for transmission over the first channel, wherein the circuitry is also configured to recover any of the device identification data received at the second output (abstract and page 1, lines 16 – 52).

Again, Siegbert Hentschke differs from the instant claimed invention that it does not expressly show the transmitter transmitting the video data instead of the main data stream.

However, one of ordinary skill in the art recognize and implement Siegbert Hentschke that it can use the function of the transmitter being to transmit various data including the video data.

Therefore, from the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement Siegbert Hentschke's teaching to provide the requirements of the instant claimed invention for transmitting the video data to the receiver over the communication link.

Regarding claim 52, Siegbert Hentschke discloses (figure 1 and abstract) that a communication system, including:

- A receiver;
- A transmitter; and
- A communication link between the transmitter and the receiver, wherein the transmitter is configured to transmit main data stream to the receiver over the link, the transmitter is configured to transmit encoded words indicative of auxiliary data to the receiver over the link, at least one bit of each of the encoded words determines at least one auxiliary data bit, and the remaining bits of the each of the encoded words determine a word of the main data.

Siegbert Hentschke differs from the instant claimed invention that it does not expressly show the transmitter transmitting video data over the link to the receiver.

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However, one of ordinary skill in the art is able to use the function of the transmitter is to transmit various data including video data.

Therefore, from the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to recognize and implement Siegbert Hentschke's teaching to provide the requirements of the instant claimed invention for transmitting the video data as well as the auxiliary data to the receiver over the communication link.

Regarding claim 56, Siegbert Hentschke discloses (figure 1 and abstract) a transmitter for use in data transmission over a communication system, including:

- A first input for receiving auxiliary (D, page 1, lines 42 and 43);
- At least one main data input for receiving main data (H, page 1, lines 42 and 43);
- An output configured to be coupled to a channel of the link (5); and
- Circuitry, coupled to the first input and to the main data (1, 3) and configured to generate encoded words indicative of the auxiliary data and the main data and assert the encoded words to the output for transmission over the channel, wherein at least one bit of each the encoded words at least one auxiliary data bit, and the remaining bits of the each of the encoded words determine a word of the main data (abstract and page 1, lines 16 – 52).

Siegbert Hentschke differs from the instant claimed invention that it does not expressly show the transmitter transmitting video data over the link to the receiver instead of the main data.

However, one of ordinary skill in the art is able to use the function of the transmitter is to transmit various data including video data.

Therefore, from the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to recognize and implement Siegbert

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transmitting the video data as well as the auxiliary data to the receiver over the communication link..

Regarding claim 57, Siegbert Hentschke discloses (figure 1 and abstract) a communication system, including:

- A receiver (5, 6, 7);
- A transmitter (1,2, 3);
- A communication link between the transmitter and the receiver (4), wherein the link comprises at least one of main data stream, wherein the transmitter is configured to transmit main data and auxiliary data to the receiver over the main data channel, the main data are determined by a first set of code words, the auxiliary data are determined by a second set of code words, and none of the code words in the second set is a member of the first set (abstract and page 1, lines 16 – 52).

Siegbert Hentschke differs from the instant claimed invention that it does not expressly show the transmitter transmitting video data over the link to the receiver.

However, one of ordinary skill in the art is able to use the function of the transmitter is to transmit various data including video data.

Therefore, from the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to recognize and implement Siegbert Hentschke's teaching to provide the requirements of the instant claimed invention for transmitting the video data to the receiver over the communication link.

Regarding claim 59, Siegbert Hentschke discloses (figure 1 and abstract) a transmitter for use in data transmission over a communication system, including:

- A first input for receiving auxiliary (D, page 1, lines 42 and 43);
- At least one main data input for receiving main data (H, page 1, lines 42 and 43);

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- Circuitry (1, 3), coupled to the first input and to the main data and configured to generate code words indicative of the auxiliary data and the main data and assert the code words to the output for transmission over the channel, with the main data are determined by a first set of the code words, the auxiliary data are determined by a second set of the code words, and none of the code words in the second set is a member of the first set (abstract and page 1, lines 16 – 52).

Siegbert Hentschke differs from the instant claimed invention that it does not expressly show the transmitter transmitting video data over the link to the receiver.

However, one of ordinary skill in the art is able use the function of the transmitter is to transmit various data inside the main data stream including video data.

Therefore, from the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to recognize and implement Siegbert Hentschke's teaching to provide the requirements of the instant claimed invention for transmitting the video data as well as the auxiliary data to the receiver data over the communication link..

Regarding claim 99, Siegbert Hentschke discloses (figure 1) a receiver for use in data transmission over a communication link, including:

- An input for receiving auxiliary data ((D, page 1, line 43);
- A main data input configured to be coupled to a main data channel of the link (H, page 1, lines 42 and 43);
- An output configured to be coupled to another channel of the link (5, 6, and page 1, line 50); and
- Circuitry (5, 6), coupled to the output, and configured to operate in a first mode in which it asserts a signal indicative of the auxiliary data to the output, and to operate in a second mode in which it asserts to the output a signal indicative of presence of a device coupled to the receiver (abstract and page 1, lines 16 – 24)

Siegbert Hentschke differs from the instant claimed invention that it does not expressly show the transmitter transmitting video data over the link to the receiver.

However, one of ordinary skill in the art is able to use the function of the transmitter is to various data inside the main data stream including video data.

Therefore, from the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to recognize and implement Siegbert Hentschke's teaching to provide the requirements of the instant claimed invention for transmitting the video data as well as the auxiliary data to the receiver over the communication link.

Regarding claim 112, Siegbert Hentschke discloses (figure 1 and abstract) a transmitter for use in data transmission over a communication system, including:

- A receiver;
- A transmitter; and
- A communication link between the transmitter and the receiver, wherein the link includes at least one conductor pair between the transmitter and the receiver (3, 5), wherein at least one of the transmitter and the receiver is configured to transmit a differential signal (abstract and page 1, lines 16 – 52).

Siegbert Hentschke differs from the instant claimed invention that it does not expressly show the transmitter transmitting video data over the link to the receiver.

However, one of ordinary skill in the art is able to use the function of the transmitter is to transmit various data (including video data).

Therefore, from the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to recognize and implement Siegbert Hentschke's teaching to provide the requirements of the instant claimed invention for transmitting the video data as well as the auxiliary data to the receiver over the communication link.

Regarding claim 125, Siegbert Hentschke discloses (figure 1) a communication system, including:

- A receiver;
- A transmitter
- A communication link between the transmitter and the receiver, wherein the link comprises at least one main data channel, the transmitter is configured to transmit main data stream and auxiliary data to the receiver over the main data channel, the main data are determined by a first set of code words, the auxiliary data are determined by a second set of code words, and each of the code words in the second set is determined by a robust encoding logarithm (abstract and page 1, lines 16 – 52).

Siegbert Hentschke differs from the instant claimed invention that it does not expressly show the transmitter transmitting video data over the link to the receiver.

However, one of ordinary skill in the art is able to use the function of the transmitter is to transmit various data including video data.

Therefore, from the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to recognize and implement Siegbert Hentschke's teaching to provide the requirements of the instant claimed invention for transmitting the video data as well as the auxiliary data to the receiver over the communication link.

Regarding claim 130, Siegbert Hentschke discloses (figure 1) a communication system, including:

- A main data input for receiving main data (H, page 1, lines 42 and 43);
- An auxiliary data input for receiving auxiliary data (D, page 1, lines 42 and 43);
- An output configured to be coupled to a channel of the link (5); and
- Circuitry (1, 3) coupled to the main data input, the auxiliary data input, and the

the main data and the auxiliary data, wherein the codewords include a first set of code words and a second set of code words, each of the code words in the first set determines a word of the main data, each of the code words in the second set determines a word of the auxiliary data, and each of the code words in the second set is determined by a robust encoding logarithm (abstract and page 1, lines 16 – 52).

Siegbert Hentschke differs from the instant claimed invention that it does not expressly show the transmitter transmitting video data over the link to the receiver.

However, one of ordinary skill in the art is able to use the function of the transmitter is to transmit various data including video data.

Therefore, from the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to recognize and implement Siegbert Hentschke's teaching to provide the requirements of the instant claimed invention for transmitting the video data as well as the auxiliary data to the receiver over the communication link.

13. **Claims 7, 22, and 50 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Siegbert Hentschke (UK patent application publication # GB 2 174 577 A), in view of Yogeshwar et al. (US patent application # 2003/0210821 A1).

Regarding claim 7, as followed by the limitations analyzed in claim 1, Siegbert Hentschke differs from the instant claimed invention that it does not expressly show wherein the auxiliary data being digital data.

However, Yogeshwar et al. discloses wherein the auxiliary data being digital data (page 4, first column, lines 34 – 42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Siegbert Hentschke's teaching and Yogeshwar et al.'s teaching to provide the requirements of the instant claimed invention for transmitting the auxiliary data as digital audio data.

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Regarding claim 22, as followed by the limitations analyzed in claim 18, the limitations are analyzed in the same manner set forth as claim 7.

Regarding claim 50, as followed by the limitations analyzed in claim 48, the limitations are analyzed in the same manner set forth as claim 7.

14. Claims 31, 32, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siegbert Hentschke (UK patent application publication # GB 2 174 577 A), in view of Williams (US patent application # 2003/0014755 A1).

Regarding claim 31, Siegbert Hentschke discloses (figure 1 and abstract) that a communication system, including:

- A transmitter;
- A receiver; and
- A communication link between the transmitter and the receiver, wherein the transmitter is configured to transmit main data stream over the link to the receiver, wherein the main data are transmitted as a stream of binary data words (page 2, lines 1 – 15) that determine an auxiliary signal as well as the main data (abstract and page 1, lines 16 – 52).

Siegbert Hentschke differs from the instant claimed invention that it does not expressly show the transmitter transmitting an analog audio signal as well as the video data and determining an auxiliary signal as well as video data.

However, one of ordinary skill in the art is able to use the function of the transmitter is to transmit various data (including an analog auxiliary signal as well as the video data as Williams, page 1, first column, paragraph # 0003), that determine an auxiliary as well as the video data.

Therefore, from the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Siegbert Hentschke's teaching and Williams's teaching to provide the requirements of the instant claimed invention for

transmitting the analog auxiliary signal as well as the video data to the receiver data over the communication link.

Regarding claim 32, as followed by the limitations analyzed in claim 31, Williams further discloses the analog auxiliary data being an analog audio signal (page 1, first column, paragraph # 0003).

Regarding claim 35, Siegbert Hentschke discloses (figure 1 and abstract) that a transmitter for use in data transmission over a communication system, including:

- A first input for receiving auxiliary (D, page 1, lines 42 and 43);
- At least one main data input for receiving main data (H, page 1, lines 42 and 43);
- An output configured to be coupled to a channel of the link (5); and
- Circuitry coupled to the first input and to the main data input (1, 3) and configured for generating an output signal in response to the auxiliary data and asserting the output signal to the output for transmission over the channel, wherein the output signal is indicative of a stream of binary data words (page 2, lines 1 – 15) that determine an auxiliary signal as well the main data, wherein the auxiliary signal is indicative of the auxiliary data (abstract and page 1, lines 16 – 52).

Again, Siegbert Hentschke differs from the instant claimed invention that it does not expressly show the transmitter transmitting an analog audio signal as well as the video data, wherein the analog auxiliary is indicative of the auxiliary data.

However, one of ordinary skill in the art is able to the function of the transmitter is to transmit various data (including an analog auxiliary signal as well as the video data as Williams, page 1, first column, paragraph # 0003), so the analog auxiliary signal is indicative of the auxiliary data.

Therefore, from the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Siegbert Hentschke's teaching and Williams's teaching to provide the requirements of the instant claimed invention for

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transmitting the analog auxiliary signal as well as the video data to the receiver over the communication link.

15. **Claims 82, 84, and 94 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Siegbert Hentschke (UK patent application publication # GB 2 174 577 A), in view of Pittman et al. (US patent # 5,944,281)

Regarding claim 82, Siegbert Hentschke discloses (figure 1) a method of sending over a communication link having multiple data transmission channels, comprising the step of transmitting main data over at least a first channel of the link (abstract and page 1, lines 16 – 52).

From the preceding information, one of ordinary skill in the art is able to use the transmitter for transmitting various data including video data.

Siegbert Hentschke differs from the instant claimed invention that it does not show the steps of transmitting a portion of a stream of auxiliary data over a second channel of the link, and then transmitting another portion of the stream of auxiliary data over one of the first channel and a third channel of the link.

However, Pittman et al. discloses the steps of transmitting a portion of a stream of auxiliary data over a second channel of the link, and then transmitting another portion of the stream of auxiliary data over one of the first channel and a third channel of the link (column 2, lines 7 – 65).

Therefore, from the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Siegbert Hentschke's teaching and Pittmann et al.'s teaching to provide the requirements of the instant claimed invention for transmitting the video data as well as auxiliary over the channels of the link.

Regarding claim 84, Siegbert Hentschke discloses (figure 1) a method of sending over a communication link having multiple data transmission channels, comprising the steps of:

- Transmitting main data over at least a first channel of the link;

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- Transmitting a first stream of auxiliary (D) over a second channel of the link (abstract and page 1, lines 16 – 52).

From the preceding information, one of ordinary skill in the art may not need to use the TMDS-like communication link to transmit the main data stream over the link to the receiver, and the function of the transmitter is to transmit various data including video data.

Siegbert Hentschke differs from the instant claimed invention that it does not show the step of transmitting a second stream of auxiliary data over one of the first channel and a third channel of the link.

However, Pittman et al. discloses the step of transmitting a second stream of auxiliary data over one of the first channel and a third channel of the link (column 2, lines 7 – 65).

Therefore, from the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Siegbert Hentschke's teaching and Pittman et al.'s teaching to provide the requirements of the instant claimed invention for transmitting the video data as well as auxiliary over the channels of the link.

Regarding 94, Siegbert Hentschke discloses (figure 1) a transmitter for use in data transmission over a link, including:

- At least one main data input for receiving main data (H, page 1, lines 42 and 43);
- An auxiliary data input for receiving auxiliary (D, page 1, lines 42 and 43);
- A main data output configured to be coupled to a first channel of the link;
- Circuitry coupled between the main data input (1, 3) and the main data output (page 1, lines 48 – 52) and configured to assert a signal indicative of at least some of the main data to the main data output in response to the main data (abstract and page 1, lines 16 – 52).

From the preceding information, one of ordinary skill in the art is able to use the function of the transmitter as to transmit various data including video data.

Siegbert Hentschke differs from the instant claimed invention that it does not show the steps of circuitry, coupled between the second output and the auxiliary data input and configured to operate in a first mode in which it asserts a second signal indicative of the auxiliary data to the second output in response to the auxiliary data, and to operate in a second mode in which it monitors the second output for a third signal received over the second channel of the link.

However, Pittman et al. discloses the steps of circuitry, coupled between the second output and the auxiliary data input and configured to operate in a first mode in which it asserts a second signal indicative of the auxiliary data to the second output in response to the auxiliary data, and to operate in a second mode in which it monitors the second output for a third signal received over the second channel of the link. (column 2, lines 7 – 65).

Therefore, from the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Siegbert Hentschke's teaching and Pittmann et al.'s teaching to provide the requirements of the instant claimed invention for transmitting the video data as well as auxiliary over the channels of the link.

16. **Claims 83, 85, and 92 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Siegbert Hentschke (UK patent application publication # GB 2 174 577 A), Pittman et al. (US patent # 5,944,281), and further in view of Yogeshwar et al. (US patent application publication # 2003/0210821 A1).

Regarding claim 83, as followed by the limitations analyzed in claim 82, Siegbert Hentschke and Pittman et al. differ from the instant claimed invention that they do not expressly show wherein at least one of the auxiliary data being a stream of audio data.

However, Yogeshwar et al. discloses wherein the auxiliary data being stream of audio data (page 4, first column, lines 34 – 42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Siegbert Hentschke's and Yogeshwar et al.'s teaching to provide

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the requirements of the instant claimed invention for transmitting the auxiliary data as audio data.

Regarding claim 85, as followed by the limitations analyzed in claim 84, the limitations are analyzed in the same manner set forth as claim 83.

Regarding claim 92, as followed by the limitations analyzed in claim 91, the limitations are analyzed in the same manner set forth as claim 83.

17. **Claim 93 is rejected** under 35 U.S.C. 103(a) as being unpatentable over Siegbert Hentschke (UK patent application publication # GB 2 174 577 A), Pittman et al. (US patent # 5,944,281), Yogeshwar et al. (US patent application publication # 2003/0210821 A1), and further in view of Rakib (US patent application publication # 2002/0019984 A1).

Regarding claim 93, as followed by the limitations analyzed in claim 92, Siegbert Hentschke, Pittman et al., and Yogeshwar et al. differ from the instant claimed invention that they do not expressly show wherein the receiver is configured to assert the second signal during the second mode, and the second signal is indicative of a downstream device coupled to the receiver.

However, Rakib discloses (figure 3) wherein the receiver is configured to assert the second signal during the second mode (127), and the second signal is indicative of a downstream device coupled to the receiver (page 6, second column, paragraph # 0057).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Siegbert Hentschke's teaching, Yogeshwar et al.'s teaching, and Rakib's teaching to provide the requirements of the instant claimed invention for determining the second signal in second mode.

18. **Claims 91 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Pittman et al. (US patent # 5,944,281).

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Regarding claim 43, Pittman et al. discloses (figure 7):

- A transmitter;
- A receiver; and
- A communication link between the transmitter and the receiver, wherein the link has multiple data transmission channels, the transmitter is configured to transmit video data to the receiver over at least a first channel of the link, the transmitter and the receiver are configured to operate in a first mode in which the transmitter transmits a signal indicative of auxiliary data over a second channel of the link to the receiver, and the transmitter and the receiver are configured to operate in a second mode in which the receiver asserts a second signal over the second channel to the transmitter (column 2, lines 7 – 65 and column 7, line 24 to column 8, line 20).

Pittman et al. differs from the instant claimed invention that it does not expressly show the transmitter transmitting video data over the link to the receiver.

However, one of ordinary skill in the art is able to use the function of the transmitter as to transmit various data including video data.

Therefore, from the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to recognize and implement Pittman et al. to provide the requirements of the instant claimed invention for transmitting the video data to the receiver over the communication link.

19. **Claim 41 is rejected** under 35 U.S.C. 103(a) as being unpatentable over Piccirilo et al. (US patent # 5,557,278), in view of Yogeshwar et al. (US patent application # 2003/0210821 A1).

Regarding claim 41, as followed by the limitations analyzed in claim 36, Piccirilo et al differs from the instant claimed invention that it does not expressly show wherein the auxiliary data being digital data.

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However, Yogeshwar et al. discloses wherein the auxiliary data being digital data (page 4, first column, lines 34 – 42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Piccirilo et al.'s teaching and Yogeshwar et al.'s teaching to provide the requirements of the instant claimed invention for transmitting the auxiliary data as digital audio data.

20. **Claims 52 and 56 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Crinon (US patent # 6,801,575).

Regarding claim 52, Crinon discloses (column 3, lines 26 - 35, and column 5, line 50 to column 6, line 60):

- A transmitter;
- A receiver; and
- A communication link between the transmitter and the receiver, wherein transmitter is configured to transmit video data to the receiver over the link, the transmitter is configured to transmit encoded words indicative of auxiliary data to the receiver over the link,

Again, Crinon differs from the instant claimed invention that it does not expressly show a communication link between the transmitter and the receiver is a TMDS-like communication link.

However, one of ordinary skill in the art is able to perform a communication link without using a TMDS-like system.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to recognize and implement Crinon's teaching as providing the requirement of the instant claimed invention for transmitting the video data as well as the auxiliary data over the communication link to the receiver.

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Regarding claim 56, Crinon discloses (figure 5, abstract, column 3, lines 26 - 35, and column 5, line 50 to column 6, line 60) a transmitter for use in data transmission over a communication link, including:

- A first input (112) for receiving auxiliary data (column 6, lines 10 - 13);
- A video input for receiving video data (column 6, lines 35 - 39);
- An output configured to be coupled to a channel of the link (114); and
- Circuitry (114), coupled to the first input and to the video input, and configured to generate encoded words indicative of the auxiliary data and the video data and asset the encoded words to the output for transmission over the channel, wherein at least one bit of each of the encoded words determines at least one auxiliary data bit, and the remaining bits of each of the encoded words determine a word of the video.

Crinon differs from the instant claimed invention that it does not expressly show the communication link being a TMDS-like communication link.

However, one of ordinary skill in the art recognizes that Crinon may not need the TMDS-like communication link to transmit the video data and the auxiliary data over the link to the receiver.

Therefore, from the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to recognize and implement Crinon's teaching to provide the requirements of the instant claimed invention for using the TMDS-like communication link to transmit the video data and auxiliary data over the link to the receiver.

21. **Claim 59 is rejected** under 35 U.S.C. 103(a) as being unpatentable over Kobayashi (US patent application publication # 2002/0102097 A1).

Regarding claim 59, Kobayashi discloses (figure 14) a transmitter for use in data link transmission over a link, the transmitter including:

- A first input for receiving auxiliary data (page 9, first column, paragraph # 0159);
- A video input for receiving video data (page 9, first column, paragraph # 0159);

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- An output configured to be coupled to a channel of the link (13); and
- Circuitry (13), coupled to the first input and to the video input, and configured to generate code words indicative of the auxiliary data and the video data and assert the code words to the output for transmission over the channel, wherein the video data are determined by a first set of the code words, and none of the code words in the second set is a member of the first set (abstract and page 1, second column, paragraph # 0012).

Kobayashi differs from the instant claimed invention that it does not expressly show a communication link between the transmitter and the receiver is a TMDS-like communication link.

However, one of ordinary skill in the art is able to perform a communication link without using a TMDS-like system.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to recognize and implement Kobayashi's teaching as providing the requirement of the instant claimed invention for transmitting the video data as well as the auxiliary data over the communication link to the receiver.

Allowable Subject Matter

22. **Claim 23, 28, 29, 42, 51, 63, 64, 65, 94, 100, 106, 110, 111, 112, 116, 118, 120, 122 - 124, 130, 132, 142 would be allowable** if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

23. **Claims 9, 13, 14, 24 – 27, 30, 33, 34, 37 – 40, 44, 45, 49, 53 – 55, 58, 62, 66, 67, 70 – 73, 77, 78, 80, 81, 86 – 88, 93, 97, 98, 102 – 105, 107 – 109, 113 – 115, 117, 119, 121, 126 – 129, 131, 133 – 141, and 143 are objected** to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US patent application publications:

Preston et al. (US patent application publication # 2004/0125824 A1) discloses a network delay identification method and apparatus.

Marko et al. (US patent application publication # 2002/0071658 A1) discloses a method and its corresponding apparatus for composite data stream storage and playback.

Knox (US patent application publication # 2001/0009570 A1) discloses a wireless and data transceiver system.

US patent documents:

Hughes et al. (US patent # 6,870,831 B1) discloses a flexible, self-aligning time and space switch fabrics.

Davis et al. (US patent # 6,643,815 B1) discloses data compression over communication links which are exposed to occasional errors.

Beierle et al. (US patent # 6,552,832 B1) discloses a telecommunication system including transmultiplexer installed between digital switch and optical signal transmission fiber.

Yamashita (US patent # 6,437,175 B1) discloses data transmission method and its corresponding apparatus.

Clapp et al. (US patent # 4,562,466) discloses a digital data transmission/reception having adaptive error control.

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Henry (US patent # 4,309,694) discloses a zero disparity coding system.

Griffiths (US patent # 3,631,471) discloses a low disparity binary codes.

Contact Information

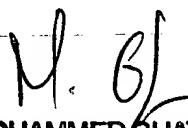
25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung X. Nguyen whose telephone number is (571) 272-3010. The examiner can normally be reached on Monday through Friday from 8:00 AM to 17:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone numbers for this group is (571) 273-3021.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

DXN

February 24, 2005



**MOHAMMED GHAYOUR
SUPERVISORY PATENT EXAMINER**